ADVICS North America, Inc.

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Nov 4th, 2010

Mr. Daniel C. Smith
Associate Administrator for Enforcement
National Highway Traffic Safety Administration
1200 New Jersey Ave, SE – Room W45-306
Washington, D.C. 20590

Re: Amendment to 10E-051000

Dear Mr. Smith

This letter constitutes a request for your acceptance of a declaration of amendment to the prior defect information report 10E-051000 submitted October 27, 2010. It shall be noted that the following points are reflected in the revised defect investigation report we are requesting to be amended:

1) In reference to the Toyota Part 573 report dated October 21, 2010 the NHTSA Campaign Number was incorrectly referenced as 10V-399. It should have been referenced as NHTSA Campaign 10V-499.
2) Based on further investigation, the quantity of potentially defective units has increased from 1,200,364 to approximately 1,228,544. (Toyota 728,544 and Honda approximately 500,000).
3) Per the request of the NHTSA office we have added clarification of the chronology of events from an ADVICS perspective.
4) Per the request of the NHTSA office we have added the brake master cylinder part numbers that contains the afore mentioned seals.

Please accept the amended defect investigation report in its entirety. If you have any questions, please contact me at 513-696-5465.

Sincerely,

Jeremy L. Cox
Corporate Quality Manager
ADVICS North America, Inc.

Defect Information Report

573.6(c)(1)

Manufacturer's Name and Address:
ADVICS Co., Ltd
2-1, Showa-cho
Kariya, Aichi 448-8688 Japan

ADVICS North America, Inc.
1650 Kingsview Drive
Lebanon Ohio, 45036, U.S.A.

573.6(c)(2)

Vehicles or equipment potentially involved in this defect notification:
Brake master cylinders supplied to Toyota Motor Corporation and Honda Motor Co. Ltd. (with their respective affiliated manufacturers) as listed in Part 573 reports dated October 21, 2010 from each vehicle manufacture. (NHTSA Campaign Number: 10V-499 and NHTSA Campaign Number: 10V-504).

Honda
- Odyssey: 4600A-SHJ-A000
- Legend: 4600A-SJA-A000-03, 4600A- SJA-A000-04, 4600A- SJA-A000-05

Toyota
- RX: 47200-48240, 47200-0E010, 47200-0E020
- Highlander: 47200-48300, 47200-48310
- GS: 47200-30A40
- IS: 47200-53430, 47200-53450
- Avalon: 47200-07150

573.6(c)(3)

Total number of vehicles or items of equipment:
There were approximately 1,228,544 (Toyota 728,544 and Honda approximately 500,000) brake master cylinders potentially affected, details of which are specifically outlined in Part 573 reports dated October 21, 2010 (including any subsequent amendments) from each vehicle manufacturer.

573.6(c)(4)

Approximate percentage of vehicles or equipment estimated to actually contain the defect:
Unknown

573.6(c)(5)

Description of anomaly:
It is possible that a part of the rubber seal at the end of the brake master cylinder may become twisted within its retention groove during movement of the piston if the brake fluid that is used contains no polymer or only small amounts, which could result in a leak of a small amount of fluid. For more detail, please refer to Part 573 reports filed by the vehicle manufacturers.

573.6(c)(6)

Chronological summary of events leading to this determination:
~~As described in Part 573 reports dated October 21, 2010 from each vehicle manufacturer.~~

February 2005 – January 2006

ADVICS received field technical reports from its customer Toyota indicating brake warning lamp illumination and fluid leakage from the brake master cylinder in several Toyota models. ADVICS examined the returned master cylinders and found that a part of the rubber seal located at the rear of the brake master cylinder had curled. Residual brake fluid was available in some of the returned master cylinders and was also examined. It was found that this fluid was different from the original Toyota fluid and in some cases was DOT4. ADVICS presumed that the problems

were attributed to the use of this fluid. ADVICS also conducted replication tests using DOT4 fluid and confirmed that the rubber seal may curl when this fluid is used.

In addition, in November of 2005, the rubber seals in the master cylinders covered by this recall were changed to be common with other Toyota vehicles. This change resulted in more robustness against seal curling.

February 2006 – February 2010

ADVICS continued to sporadically receive field technical reports from its customer Toyota, along with the failed parts, ADVICS examined each returned brake master cylinder and the residual brake fluid in those parts, when available. In all cases, the rubber seals had curled and the residual brake fluid was different from the original Toyota fluid.

March 2010 – June 2010

ADVICS continued to receive field technical reports from its customer Toyota, predominantly from the Japan market, and began further investigation. This included studying in the mechanism of seal curling, the effect on intrusion of the fluid into the brake booster, and the composition of the brake fluid. The investigation found that certain brake fluids sold in the aftermarket contain only small amounts of polymers, causing deteriorated lubrication at the seal, which could lead to the seal curling during piston movement. However, it was confirmed that intrusion of the brake fluid into the brake booster does not have any effect on the function of the booster.

July 2010 – Early October 2010

ADVICS conducted an additional assessment of this issue, including testing. ADVICS found that the amount of leakage from the brake master cylinder is very small. Even if there is sufficient leakage to cause the brake warning lamp to illuminate, testing indicates that the vehicle can be driven after warning lamp illumination for an additional 300 kilometers (based on six brake applications each kilometer) before any noticeable difference in brake pedal feel can be discerned (i.e., a gradual "spongy" feel), and without deterioration of braking performance. If brake fluid is not added at this point, the brake pedal feel could change and brake performance could begin to gradually decline. However, even if this were to occur, sufficient braking force remains to stop the vehicle safely. After another 150 kilometers, one of the brake circuits could become non-functional, but, because of the location of the seal, no further leakage can occur that would compromise the other brake circuit. Based on this assessment, ADVICS and Toyota believed that this condition does not present an unreasonable safety risk. In addition, it was also confirmed that seals produced from November 2005 are not affected when brake fluid with little or no polymer material is used in the master cylinder.
ADVICS notified Honda (its other potentially affected customer) even though there hadn't been any Honda product field claims presented to ADVICS showing this phenomenon. On September 16th, 2010 ADVICS notified Honda of the potential concern and informed them about recent developments in its other customer's product performance in regards to leakage. Honda was then able to obtain claim samples from its field returns for ADVICS to analyze. ADVICS received these field claims on October 01st, 2010. Some of the Honda claims did in fact show a similar condition to the Toyota claims. ADVICS presented this information to Honda on October 12th, 2010.

Mid October 2010

Notwithstanding the absence of risk to motor vehicle safety, this condition creates a non-compliance with a Japanese regulation that prohibits leakage of brake fluid in in-use vehicles and, therefore, our customers (Toyota and Honda) will conduct a recall campaign in Japan. For other countries, including the U.S., although no one has determined that a safety-related defect exists; in order to alleviate potential consumer concerns and avoid confusion, our customers (Toyota and Honda) has decided to conduct a voluntary recall campaign in the U.S. and other countries.

573.6(c)(8)(i)

Description of proposed remedy (including schedule for dealer and customer notification):

Each vehicle manufacturer's remedy action is described in the respective Part 573 reports dated October 21, 2010.

573.6(c)(8)(ii)

Program for remedy campaign:

ADVICS will act in cooperation with the vehicle manufacturers as they have described in Part 573 reports dated October 21, 2010 from both vehicle manufacturers.